Claims

1. A dyestuff of the formula I



(I)

wherein

each of $R^1$, $R^2$, $R^3$, $R^4$ and $R^5$, independently, is H or an optionally substituted alkyl group;

each of $X_1$ and $X_2$, independently, is a labile atom or group;

each of x and y, independently, is 0 or 1 and at least one of x and y is 1;

each of a and b is 2 to 5 and when each of x and y is 1, a > b; and
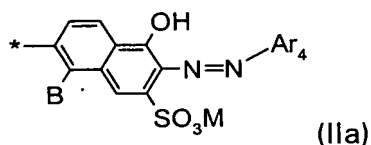
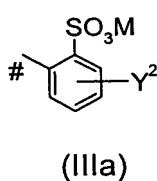z is 0, 1, 2, 3 or 4.

$D_1$ is a group of the formula II
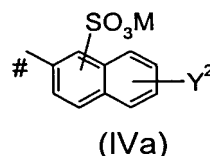


(II)

wherein

B is H or $SO_3M$;

M is H, an alkali metal, an ammonium ion or the equivalent of an alkaline earth metal;

* indicates the bond to the triazinylamino group;

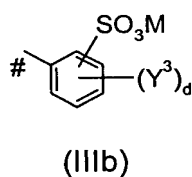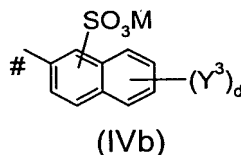$Ar_1$ is a group of the formula III or of the formula IV



(III)     or     (IV)

wherein

the or each Y independently is $SO_3M$ or an alkyl group, c is 0, 1 or 2, M is defined as given above and # indicates the bond to the azo group; or

$D_1$ is a group of the formula IIa



(IIa)

wherein

B is H or $SO_3M$;

M is H, an alkali metal, an ammonium ion or the equivalent of an alkaline earth metal;

* indicates the bond to the triazinylamino group;

$Ar_4$ is a group of the formula IIIa or of the formula IVa



(IIIa)    or    (IVa)

wherein

$Y^2$ is $-N=N-Ar_5$, M is defined as given above and # indicates the bond to the azo group, wherein

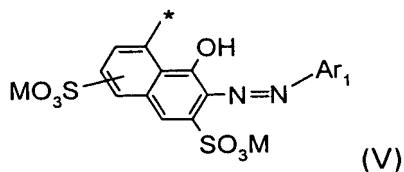$Ar_5$ is a group of the formula IIIb or of the formula IVb



(IIIb)    or    (IVb)

wherein the or each $Y^3$ independently is $SO_3M$ or an alkyl group, d is 0, 1 or 2, M is defined as given above and # indicates the bond to the azo group; or
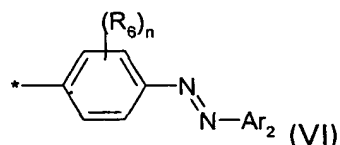
$D_1$ is a group of the formula V



(V)

wherein

M, * and $Ar_1$ are defined as given above; or
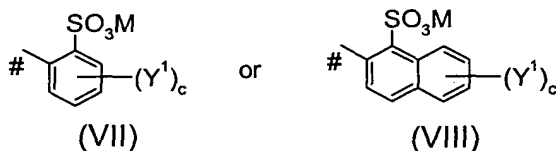
$D_1$ is a group of the formula VI


(VI)

wherein

* is defined as given above

n is 0, 1, 2 or 3;

the or each $R_6$ independently is H, $(C_1-C_4)$-alkyl, $(C_1-C_4)$-alkoxy, $NHCONH_2$, $NHCO(C_1-C_4)$-alkyl, $SO_3M$ or halogen;

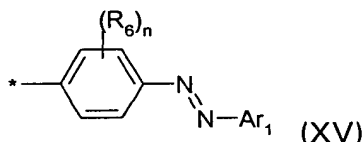$Ar_2$ is a group of the formula VII or of the formula VIII


(VII)     or     (VIII)

wherein

the or each $Y^1$ independently is $SO_3M$ or an alkyl group or $-N=N-Ar_3$, wherein $Ar_3$ is an optionally substituted phenylene or naphthylene moiety;

c is 0, 1 or 2, M is defined as given above and # indicates the bond to the azo group; or
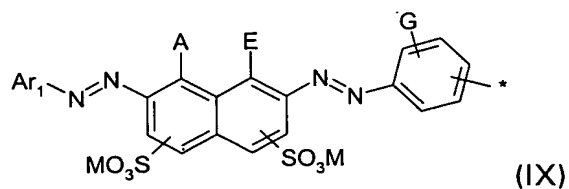
$D_1$ is a group of the formula (XV)


(XV)

wherein $R^6$, $Ar_1$, n and * are defined as given above

$D_1$ is an azoacetoacetamidoaryl, azopyridone, azopyrazolone or an azopyrimidine chromophore;

$D_2$ is a group of the formula II, provided $D_1$ is not a group of the formula V; or

$D_2$ is a group of the formula IIa; or
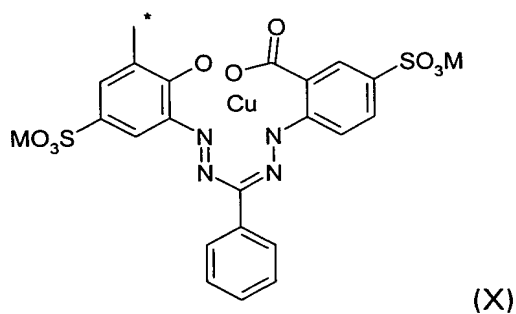
$D_2$ is a group of the formula IX

(IX)

wherein

A and E are independently OH or $NH_2$ and A ≠ E;

G is H, $(C_1-C_4)$-alkyl, $(C_1-C_4)$-alkoxy, $SO_3M$ or halogen; and

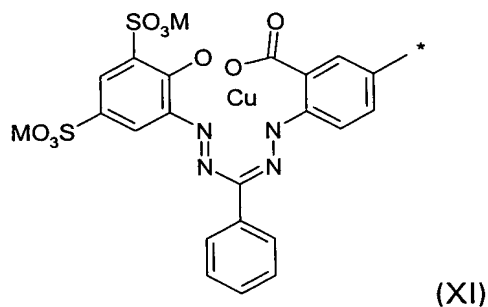Ar$_1$, M and * are defined as given above; or

$D_2$ is a group of the formula VI; or

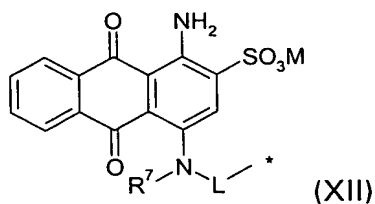$D_2$ is a group of the formula X



(X)

wherein M and * are defined as given above; or

$D_2$ is a group of the formula XI
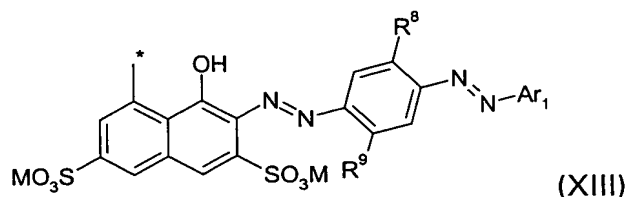


(XI)

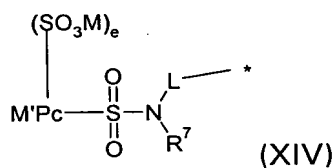wherein M and * are defined as given above; or

$D_2$ is a group of the formula XII



(XII)

wherein

$R^7$ is H or $(C_1-C_4)$-alkyl;

D₁ is a group of the formula (V) and

D₂ is a group of the formula (XV).


5. A dyestuff of the formula I as claimed in claim 1, wherein

D₁ is a group of the formula (XV) or an azoacetoacetamidoaryl, azopyridone, azopyrazolone or an azopyrimidine chromophore; and

D₂ is a group of the formula (IX), a group of the formula (X), a group of the formula (XI), a group of the formula (XII), a group of the formula (XIII) or a group of the formula (XIV).


6. A dyestuff of the formula I as claimed in claim 1, wherein

D₁ is a group of the formula (II), a group of the formula (VI) or an azoacetoacetamidoaryl, azopyridone, azopyrazolone or an azopyrimidine chromophore; and

D₂ is a group of the formula (VI), or an azoacetoacetamidoaryl, azopyridone, azopyrazolone or an azopyrimidine chromophore.


7. A dyestuff as claimed in one or more of claims 1 to 6, wherein $X_1$ and $X_2$ are halogen, preferably chlorine.
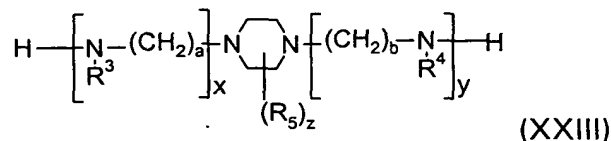

8. A dyestuff as claimed in one or more of claims 1 to 7, wherein M is H or an alkaline metal, preferably sodium.


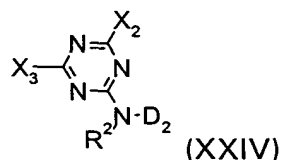9 A dyestuff as claimed in one or more of claims 1 to 8, wherein $R^3$, $R^4$ and $R^5$ are H.


10. A dyestuff as claimed in one or more of claims 1 to 9, wherein $a = b = 2$ with $x = 0$ and $y = 1$ or $x = 1$ and $y = 0$.
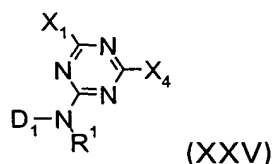

11. A process for preparing a dyestuff of formula I as claimed in one or more of claims 1 to 10 by reacting a piperazine compound of the formula XXIII

$$H-\left[\underset{\overset{|}{R^3}}{N}-(CH_2)_a\right]_x-N\underset{(R_5)_z}{\bigcirc}N-\left[(CH_2)_b-\underset{\overset{|}{R^4}}{N}\right]_y-H$$

(XXIII)

wherein $R^3$, $R^4$, $R^5$, a, b, x, y, and z are defined as given in claim 1, with a compound of the formula XXIV

$$X_3-\underset{R^2}{\overset{N=\overset{X_2}{\underset{N}{\bigvee}}}{\bigvee}}N-D_2$$

(XXIV)

wherein $R^2$, $X_2$ and $D_2$ are defined as given in claim 1 and $X_3$ is a labile atom or a group capable of reaction with an amine, preferably chlorine,

and with a compound of the formula XXV

$$\underset{D_1-N}{\overset{X_1}{\underset{R^1}{\bigvee}}}\overset{N}{\underset{N}{\bigvee}}-X_4$$

(XXV)

wherein $R^1$, $X_1$ and $D_1$ are defined as given in claim1 and $X_4$ has one of the meanings of $X_3$.


12. A process for dyeing and printing hydroxy- and/or carboxamido-containing fibre materials in which a dyestuff of the formula I according to one or more of claims 1 to 10 is used.